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United States Department of Agriculture
Natural Resources Conservation Service

Idaho Water Supply Outlook Report March 1, 2004



Owyhee River Basin near Silver City, Idaho with War Eagle Peak in background
Taken March 3, 2004 on the Owyhee Basin Aerial Marker fixed-wing airplane flight
Photograph taken by Ted Day

Basin Outlook Reports

and

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<http://www.id.nrcs.usda.gov/snow/>

How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

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IDAHO WATER SUPPLY OUTLOOK REPORT

March 1, 2004

SUMMARY

February precipitation across Idaho was a mixed blessing. February precipitation was above average and more than twice average across parts of the Snake River Valley while mountain precipitation was only above average south of the Snake River and in the Wood and Lost basins, and was half of average in northern Idaho and headwaters of the Snake in Wyoming. As a result, snowpack percentages changed based on the mountain precipitation. Highest snowpacks remain in the Owyhee basin at 155% of average, three times the amount of snow as last year. Elsewhere, most basins are 90-105% of average with the lowest at 85% of average in parts of the Bear, upper Salmon and upper Snake. Reservoir storage remains low in central, eastern and southern Idaho while reservoirs in western and northern Idaho are reporting near average storage levels. Streamflow forecasts look encouraging and call for 90-105% of average runoff volumes for most basins. The highest forecasts remain in the Owyhee basin at 125% of average and lowest is 12% for Bear River. Irrigation shortages will occur for Bear Lake water users with supplies running out by mid-July. Water supplies should be better than the past few years in Salmon Falls, Oakley, Big Wood, Big Lost, Little Lost and parts of upper Snake with average future precipitation. Below average future precipitation and warm temperatures may prompt additional shortages and make supplies marginally adequate in these basins. Snowpacks and streamflow forecasts continue to look encouraging and will provide some shortterm relief to make it through another season, but long-term dryness will remain across central, southern and eastern Idaho until several wet years occur that get moisture back into the ground, springs, seeps, wetlands and aquifers.

SNOWPACK

Changes in snowpack percentages from a month ago varied across the state depending on February precipitation. The highest snowpacks remain in southern Idaho with the Owyhee basin at 155% of average, and Oakley, Salmon Falls and Bruneau at 123%. The lowest snowpacks are 85-90% of average in the Bear, Smith, Thomas, Montpelier, Gros Ventre, Hoback, Greys, upper Salmon, and Lemhi basins. Elsewhere, snowpacks are near average at 95-110% of average. Only the Owyhee basin snowpack has exceeded its seasonal peak for the season. The basins with the lowest March 1 snowpacks when compared to their seasonal peaks are the Bear and Little Lost at only 71% of their seasonal peaks.

PRECIPITATION

February precipitation varied across the state like summer thunderstorms. February mountain precipitation was only half of average in the Panhandle Region and Clearwater basin, thus decreasing Dworshak Reservoir Inflow forecast from 113% of average last month to 100%. Precipitation was 120% of average in the mountains south of the Snake River and 107% in the Wood and Lost basins. Other mountainous areas in the state generally received 75-85% of average February precipitation. However, some Snake River valley weather stations received over 200% of their average February amounts. Precipitation is always good when you are in a drought like eastern Idaho, but having above average precipitation amounts in the mountains is more important than in the lower elevations. For example, February average precipitation values range from 2.2 to 6.6 inches for SNOTEL sites in the Upper Snake basin. Actual amounts measured at these higher elevation sites were 1.7 to 4.6 inches. Valley weather stations received amounts ranging from 0.5 to 2.4 inches while their average amounts range from 0.6 to 2.8 inches. With only another month of winter to go, much more snow is needed across southern, central and eastern Idaho to put a dent in the accumulative drought impacts. A wet spring or delayed melt of the snowpack can also improve the efficiency of the snow to produce streamflow.

RESERVOIRS

Reservoirs in the best shape and storing near average amounts are Cascade, Deadwood, Brownlee, Dworshak and Idaho Panhandle. The Boise Reservoir system, Little Wood, Henrys Fork and Island Park reservoirs are around 80% of average. Elsewhere in the state, the reservoirs are just waiting for this year's snowmelt runoff to start filling them. Blackfoot and Bear Lake are the lowest at only 15% of average. Salmon Falls and Magic reservoirs are 27% of capacity. Palisades and Jackson Lake have of combined storage of 31% of capacity, 45% of average. Mackay Reservoir is 68% of average and American Falls Reservoir is 81% of average, but is not projected to fill because of record low springs that provide the majority of inflow.

Note: NRCS reports reservoir information in terms of usable volumes, which includes both active, inactive and, in some cases, dead storage. Other operators may report reservoir contents in different terms. For additional information, see the reservoir definitions in this report.

STREAMFLOW

Streamflow forecasts decreased in areas that had below average precipitation while others remained the same or increased slightly with the above average precipitation. Most streams are forecast in the 90-105% of average range. The exception is the Bear River at Stewart Dam forecast at 12% of average because of the accumulative drought effects and lack of significant snow to forecast greater amounts than were observed the past three seasons. Water users that rely on Bear Lake should be planning and planting for irrigation shortages. However, water users who get their water supply from headwater streams or higher tributaries in the Bear River basin can expect water supplies similar to last year. Irrigation shortages are possible in the Oakley, Salmon Falls, parts of the upper Snake, Big Wood, Big Lost and Little Lost basins, especially if future precipitation is below average.

RECREATION

Idaho's whitewater boating season is looking better. The stage remains set in the Owyhee basin with some low elevation snow sites at 2-3 times their March 1 average. Overall, the snowpack is 155% of average and the best since 1997. The Bruneau River basin got a boost from the early March storms and is now 127% of average and should have a longer boating season than the past few seasons. The Middle Fork Salmon and main Salmon rivers have a snowpack at 94% of average, the best since 2000 and should see total summer volumes the best since then as well. The Lochsa and Selway rivers forecast dropped from a month ago to 90% of average because of the below average precipitation, but will still see good flows. Timing and magnitude of snowmelt streamflow peaks depend on spring precipitation and temperatures, but the low elevation Owyhee basin will be the first to melt with warming temperatures in March, so have those boats ready.

OTHER INFORMATION

NRCS will post provisional streamflow forecasts by the second working day of each month, under "Quick Glance Idaho Forecast Listing (current year)" on this web page: <http://www.id.nrcs.usda.gov/snow/watersupply/> This link will be updated with the most current forecasts until they are finalized. The complete, monthly Water Supply Outlook Report is also available on this page.

NRCS has posted a Drought and Surface Water Supply Index web page at: <http://www.id.nrcs.usda.gov/snow/watersupply/swsi-main.html>
Numerous graphs are available for users to access for their basin of interest.

IDAHO SURFACE WATER SUPPLY INDEX (SWSI) As of March 1, 2004

The Surface Water Supply Index (SWSI) is a predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry), with a value of zero indicating a median water supply as compared to historical occurrences.

SWSI values are published January through May and provide a more comprehensive outlook of water availability than either streamflow forecasts or reservoir storage figures alone. The SWSI index allows comparison of water availability between basins for drought or flood severity analysis. Threshold SWSI values have been established for most basins to indicate the potential for agricultural water shortages.

The following agencies and cooperators provide assistance in the preparation of the Surface Water Supply Index for Idaho:

US National Weather Service
US Bureau of Reclamation
Idaho Water Users Association

US Army Corps of Engineers
Idaho Dept. of Water Resources
PacifiCorp

<i>BASIN or REGION</i>	<i>SWSI Value</i>	<i>Most Recent Year With Similar SWSI Value</i>	<i>Agricultural Water Supply Shortage May Occur When SWSI is Less Than</i>
PANHANDLE	-0.9	1981	NA
CLEARWATER	0.6	2003	NA
SALMON	-0.2	2003	NA
WEISER	-0.5	2003	NA
PAYETTE	-0.2	2003	NA
BOISE	-0.2	1993	-2.1
BIG WOOD	-0.2	2000	-1.0
LITTLE WOOD	0.5	1996	-2.0
BIG LOST	-0.2	1993	-0.5
LITTLE LOST	-0.5	1990	0.0
HENRYS FORK	0.4	1989	-3.3
SNAKE (HEISE)	-2.0	1994	-2.0
OAKLEY	-1.0	1993	-1.0
SALMON FALLS	-1.5	2000	-1.0
BRUNEAU	1.2	1996	NA
BEAR RIVER	-3.9	2003	-3.8

SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION

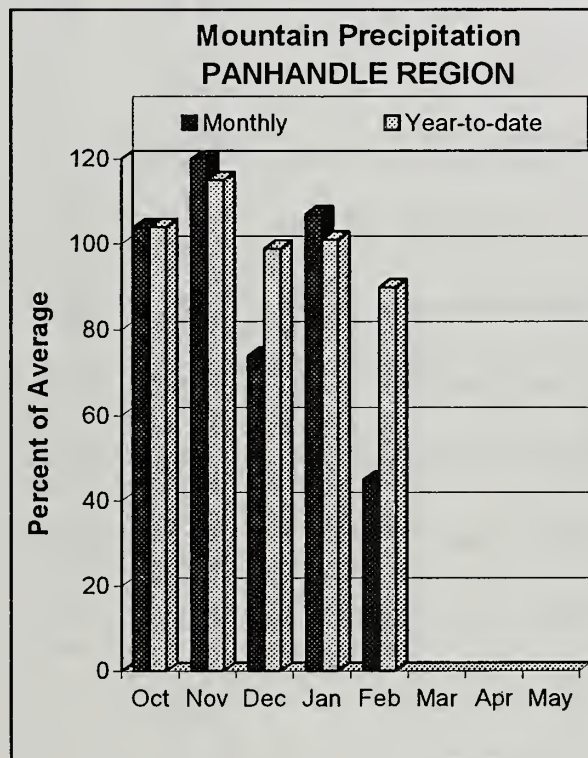
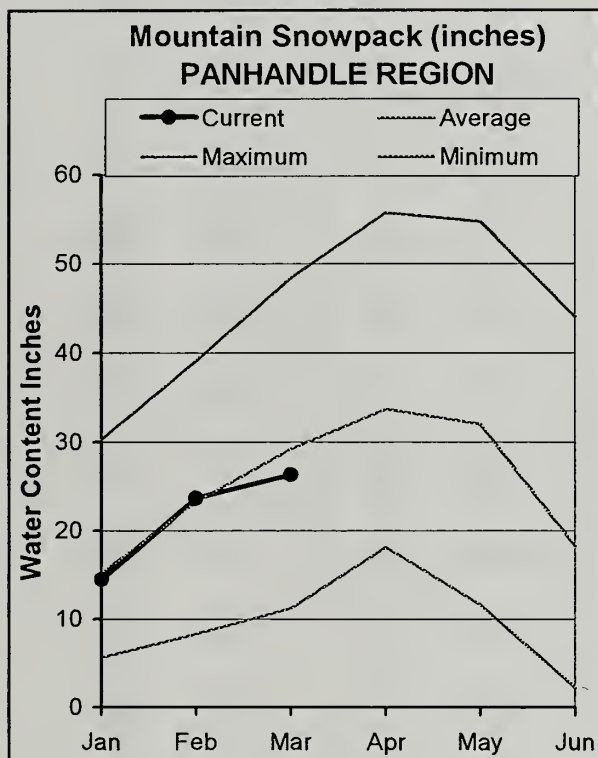
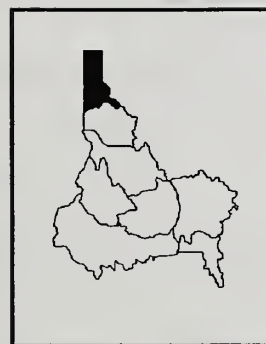
-4	-3	-2	-1	0	1	2	3	4
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99%	87%	75%	63%	50%	37%	25%	13%	1%

Much	Below	Near Normal			Above	Much		
Below	Normal	Water Supply			Normal	Above		

Note: The Percent Chance of Exceedance is an indicator of how often a range of SWSI values might be expected to occur. Each SWSI unit represents about 12% of the historical occurrences. As an example of interpreting the above scale, the SWSI can be expected to be greater than -3.0, 87% of the time and less than -3.0, 13% of the time. Half the time, the SWSI will be below and half the time above a value of zero. The interval between -1.5 and +1.5 described as "Near Normal Water Supply," represents three SWSI units and would be expected to occur about one-third (36%) of the time.

PANHANDLE REGION

MARCH 1, 2004



WATER SUPPLY OUTLOOK

February precipitation was the lowest in the state at only 45% of average. The lowest amounts were 24% of average at Bear Mountain SNOTEL site. Bear Mountain received only 2.8 inches of precipitation in February, average monthly February amount is 11.6 inches. The highest amounts that fell last month were 50-65% of average in lower elevations and eastern Washington. Water year to date precipitation decreased to 90% of average. As a result, snowpack percentages also decreased from 105% of average a month ago for the Panhandle Region as a whole to 90% of average on March 1. SNOTEL sites with the lowest percentages are along the Montana border at 75-80% of average. Overall, the snowpack is 90-100% of average for most basins. With the lack of significant winter rains that produce low elevation runoff, the low snow is still present and waiting to melt. Pend Oreille and Coeur d'Alene lakes are about 70% of their February 29 average levels while Priest Lake is at 94% of average. Streamflow forecasts decreased from above average a month ago to below average and call for 90% of average for most streams. Water supplies should be adequate for the numerous users, unless future precipitation remains much below average like it was in February.

PANHANDLE REGION
Streamflow Forecasts - March 1, 2004

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
KOOTENAI at Leonia (1,2)	APR-JUL	5440	6170	6500	92	6830	7560	7040
	APR-SEP	7510	7530	7540	93	7550	7570	8120
MOYIE RIVER at Eastport	APR-JUL	320	350	370	91	390	420	405
	APR-SEP	325	360	380	91	400	435	420
SMITH CREEK	APR-JUL	90	104	114	93	124	138	123
	APR-SEP	92	108	119	92	130	146	129
BOUNDARY CREEK	APR-JUL	88	102	112	91	122	136	123
	APR-SEP	93	108	118	92	128	143	129
CLARK FK at Whitehorse Rpds (1,2)	APR-JUL	7060	9030	9920	88	10810	12780	11300
	APR-SEP	7850	10020	11000	88	11980	14150	12500
PEND OREILLE Lake Inflow (2)	APR-JUL	8630	10040	11000	87	11960	13370	12700
	APR-SEP	9400	10950	12000	86	13050	14600	13900
PRIEST near Priest River (1,2)	APR-JUL	560	655	700	86	745	840	815
	APR-SEP	515	675	745	86	815	970	870
COEUR D'ALENE at Enaville	APR-JUL	550	655	725	98	795	900	740
	APR-SEP	585	690	765	98	840	945	780
ST. JOE at Calder	APR-JUL	830	955	1040	91	1120	1250	1140
	APR-SEP	875	1005	1090	91	1180	1310	1200
SPOKANE near Post Falls (2)	APR-JUL	1770	2100	2330	91	2560	2890	2550
	APR-SEP	1840	2190	2420	91	2650	3000	2650
SPOKANE at Long Lake (2)	APR-JUL	2030	2420	2680	94	2940	3330	2850
	APR-SEP	2200	2610	2890	94	3170	3580	3070

PANHANDLE REGION Reservoir Storage (1000 AF) - End of February					PANHANDLE REGION Watershed Snowpack Analysis - March 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
HUNGRY HORSE	3451.0	2441.0	2362.0	2047.6	Kootenai ab Bonners Ferry	30	133	90
FLATHEAD LAKE	1791.0	776.7	1145.0	802.7	Moyie River	12	121	86
NOXON RAPIDS	335.0	326.6	307.0	297.5	Priest River	4	113	98
PEND OREILLE	1561.3	570.8	907.5	778.8	Pend Oreille River	94	124	93
COEUR D'ALENE	238.5	99.5	101.7	144.9	Rathdrum Creek	2	178	104
PRIEST LAKE	119.3	53.2	62.0	56.8	Hayden Lake	2	300	122
					Coeur d'Alene River	9	187	101
					St. Joe River	5	166	96
					Spokane River	15	190	100
					Palouse River	2	275	101

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

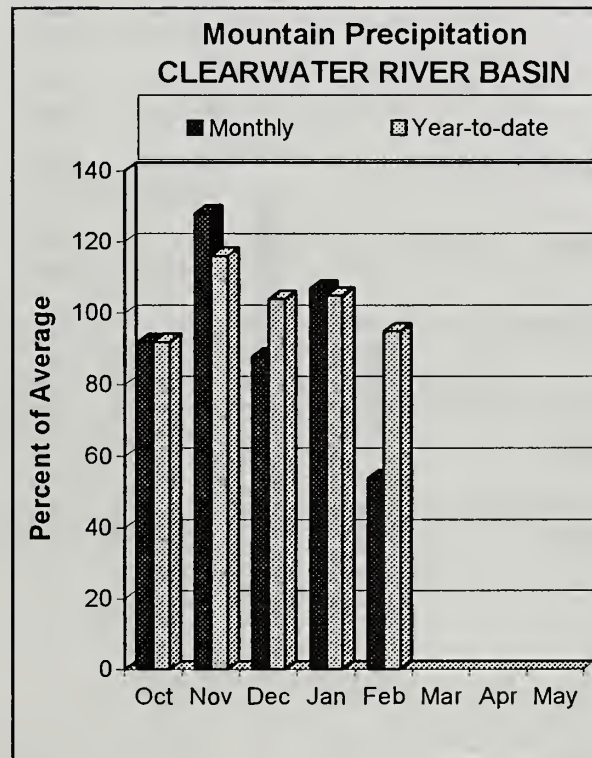
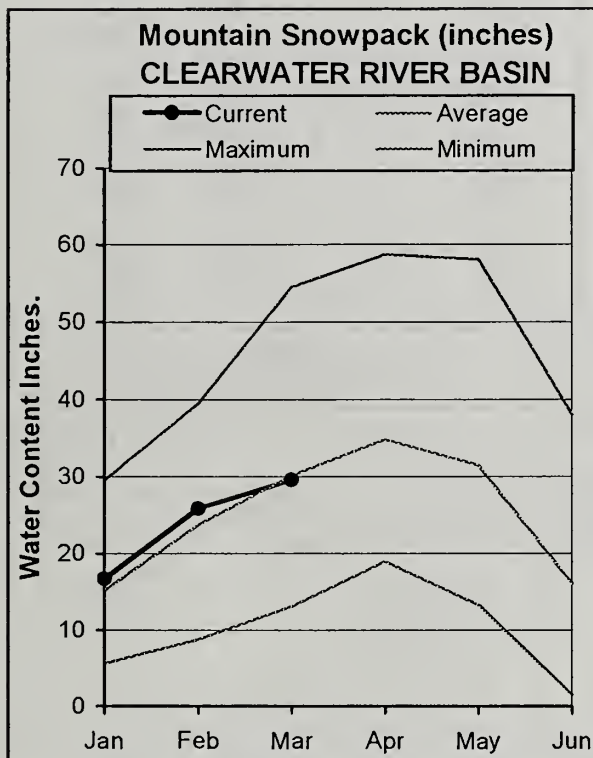
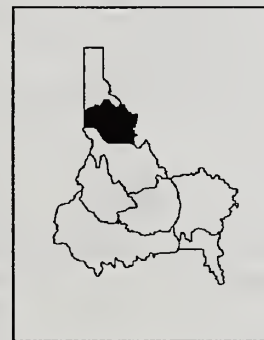
The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural volume - actual volume may be affected by upstream water management.

CLEARWATER RIVER BASIN

MARCH 1, 2004



WATER SUPPLY OUTLOOK

Precipitation in February was only 54% of average, second lowest in the state, only the Panhandle Region had less. Amounts ranged from 35-80% of average at the SNOTEL sites across the basin. Water year to date precipitation is 95% of average. Snowpacks are fairly consistent across the basin ranging from 93% of average in the Lochsa basin to 99% in the Selway and North Fork Clearwater basins. Overall, the Clearwater basin snowpack is 97% of average and is much better than a year ago when the snowpack was 74%. Dworshak Reservoir is 60% of capacity, 93% of average. The Selway River forecast decreased 10 percentage points from last month and is now forecast at 90% of average, the lowest in the basin. The Lochsa River is forecast at 91% of average, while the Clearwater River at Orofino is forecast at 95%. Dworshak Reservoir inflow is forecast at 100% of average, down from 113% a month ago. With the current snowpack at 80% of its seasonal peak, water supplies should be adequate this year unless the February dry spell continues for the next few months.

CLEARWATER RIVER BASIN
Streamflow Forecasts - March 1, 2004

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
SELWAY near Lowell	APR-JUL	1570	1740	1860	90	1980	2150	2060
	APR-SEP	1650	1840	1960	90	2080	2270	2170
LOCHSA near Lowell	APR-JUL	1200	1310	1390	91	1470	1580	1530
	APR-SEP	1270	1390	1470	91	1550	1670	1610
DWORSHAK RESV INFLOW (1,2)	APR-JUL	1710	2350	2640	100	2930	3570	2640
	APR-SEP	1900	2540	2830	101	3120	3760	2800
CLEARWATER at Orofino (1)	APR-JUL	2860	3930	4420	95	4910	5980	4650
	APR-SEP	3100	4170	4660	95	5150	6220	4900
CLEARWATER at Spalding (1,2)	APR-JUL	4930	6580	7330	99	8080	9730	7430
	APR-SEP	5340	6990	7740	99	8490	10140	7850

CLEARWATER RIVER BASIN Reservoir Storage (1000 AF) - End of February					CLEARWATER RIVER BASIN Watershed Snowpack Analysis - March 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
DWORSHAK	3468.0	2093.3	2680.0	2247.3	North Fork Clearwater	9	139	98
					Lochsa River	3	111	93
					Selway River	5	112	99
					Clearwater Basin Total	18	131	97

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

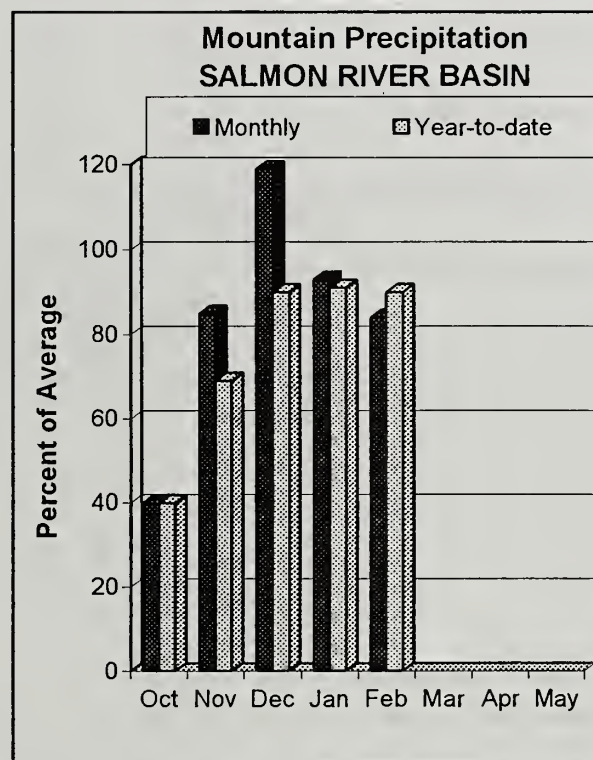
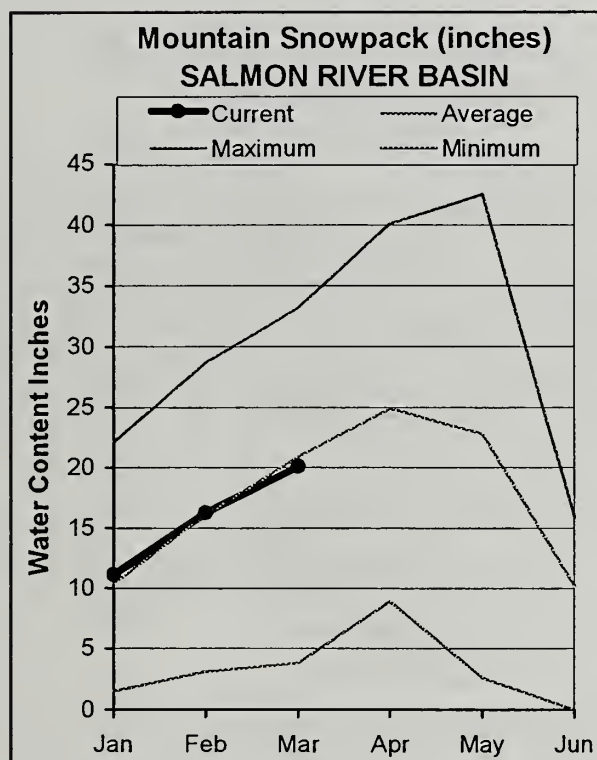
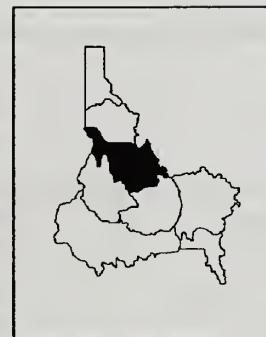
The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural volume - actual volume may be affected by upstream water management.

SALMON RIVER BASIN

MARCH 1, 2004



WATER SUPPLY OUTLOOK

February precipitation varied across the basin with the lowest amounts in the Lemhi basin at 55% of average. A few isolated SNOTEL sites along the Montana border received above average precipitation at 150%. Overall, precipitation was 84% of average for the basin as a whole. Water year to date precipitation is 90% of average. Snowpack percentages are similar to those reported last month, and the month before that with the highest percentages in the Little Salmon basin at 107% of average and lowest amounts in the Lemhi and Salmon basin above Salmon at 88%. The snowpack in the South Fork Salmon is 98% of average and is 93% in the Middle Fork Salmon basin. Overall, the Salmon basin snowpack is 96% of average, slightly better than a year ago. Streamflow forecasts mirror the snowpack with the lowest forecasts in the Lemhi River at 76% of average. The Middle Fork Salmon River is forecast at 83% of average, while the Salmon River above Salmon is forecast at 84%. The Salmon River at White Bird is forecast at 93% of average. Snowpacks are the best since 2000, another similar snow year. Streamflow runoff volumes and river running opportunities should be similar or even better than the past two years. Additional moisture, snow or spring rains, is needed in the Lemhi basin, but this can still occur in eastern Idaho and along the Montana border.

SALMON RIVER BASIN
Streamflow Forecasts - March 1, 2004

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
SALMON at Salmon (1)	APR-JUL	375	610	715	84	820	1060	855
	APR-SEP	495	730	835	84	945	1175	1000
Lemhi River nr Lemhi	APR-JUL	40	54	65	76	77	96	86
	APR-SEP	49	66	80	76	95	119	105
MF Salmon at MF Lodge	APR-JUL	463	573	655	83	742	881	785
	APR-SEP	518	640	730	83	826	979	875
SALMON at White Bird (1)	APR-JUL	3700	4910	5460	93	6010	7220	5850
	APR-SEP	4290	5500	6050	93	6600	7810	6480

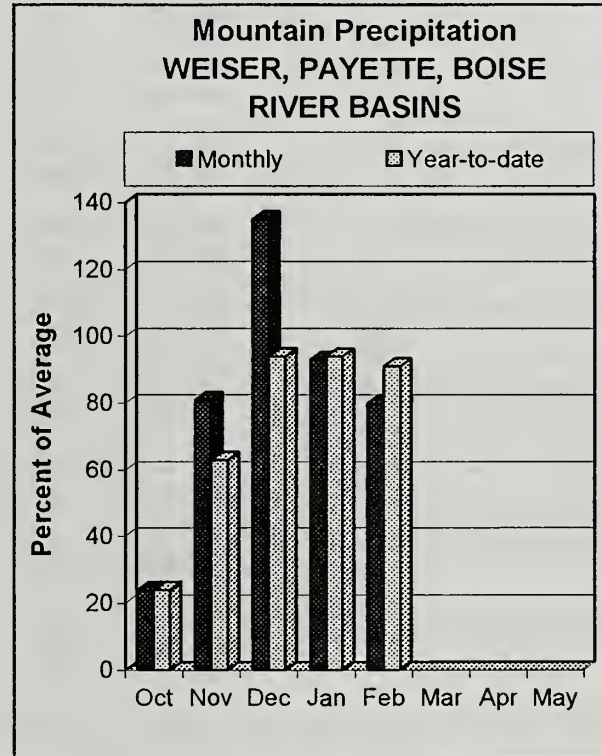
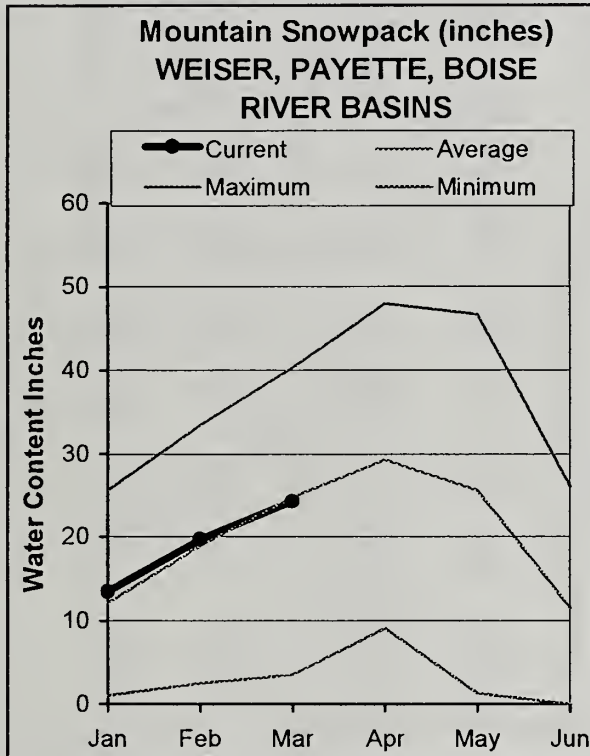
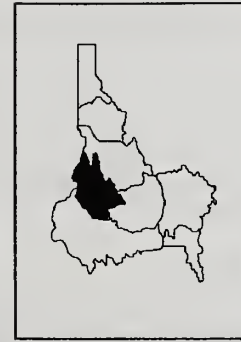
SALMON RIVER BASIN Reservoir Storage (1000 AF) - End of February					SALMON RIVER BASIN Watershed Snowpack Analysis - March 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					Salmon River ab Salmon	10	102	88
					Lemhi River	10	100	89
					Middle Fork Salmon River	3	111	93
					South Fork Salmon River	3	112	98
					Little Salmon River	4	121	107
					Salmon Basin Total	29	108	96

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

WEISER, PAYETTE, BOISE RIVER BASINS MARCH 1, 2004



WATER SUPPLY OUTLOOK

February mountain precipitation was only 80% of average in these west-central basins while valley precipitation stations was even better. The valley precipitation has improved or eliminated any soil moisture deficit in the lower elevations and the remaining low elevation snow has reduced evaporation losses from the bare soil. However, soil moisture monitored at Jackson Peak SNOTEL site at 7,070 feet, indicates that the December rains helped improve soil moisture but did not reach the deeper depths of 20 inches, and that 2-3 inches of rain or snowmelt water is needed to fill this void. Current snowpacks range from 95-115% of average for these west-central basins and are 80-85% of their seasonal peaks. Reservoir storage is 97% of average in the Payette system and 77% in the Boise system. Streamflow forecasts call for about 94% of average flow for the April-September period for the Weiser River, Payette River near Horseshoe Bend, and Boise River near Boise. The highest streamflow forecast is for Mores Creek at 124% of average and lowest is the South Fork Payette River at 89%. Water supplies should be adequate in these basins even if the minimum streamflow forecast occurs.

WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts - March 1, 2004

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
WEISER near Weiser (1)	APR-SEP	195	330	390	93	450	585	420
SF PAYETTE at Lowman	APR-JUL	315	360	390	89	420	465	440
	APR-SEP	355	405	440	89	475	525	495
DEADWOOD RESERVOIR Inflow (1,2)	APR-JUL	94	116	126	94	136	158	134
	APR-SEP	101	123	133	94	143	165	142
LAKE FORK PAYETTE near McCall	APR-JUL	68	76	82	97	88	96	85
	APR-SEP	70	79	85	96	91	100	89
NF PAYETTE at Cascade (1,2)	APR-JUL	340	435	475	97	515	610	490
	APR-SEP	380	475	515	97	555	650	530
NF PAYETTE nr Banks (2)	APR-JUL	460	550	615	95	680	770	645
	APR-SEP	500	595	665	96	735	830	690
PAYETTE nr Horseshoe Bend (1,2)	APR-JUL	1120	1400	1530	95	1660	1940	1610
	APR-SEP	1170	1510	1660	95	1810	2150	1750
BOISE near Twin Springs (1)	APR-JUL	455	550	590	93	630	725	635
	APR-SEP	480	590	640	93	690	800	690
SF BOISE at Anderson Ranch Dam (1,2)	APR-JUL	380	455	490	91	525	600	540
	APR-SEP	365	475	525	91	575	685	580
MORES CREEK near Arrowrock Dam	APR-JUL	124	147	162	124	177	201	131
	APR-SEP	129	152	168	123	184	206	137
BOISE near Boise (1,2)	APR-JUN	885	1070	1160	92	1250	1440	1260
	APR-JUL	885	1170	1300	92	1430	1710	1410
	APR-SEP	1000	1280	1410	92	1540	1820	1530

WEISER, PAYETTE, BOISE RIVER BASINS Reservoir Storage (1000 AF) - End of February					WEISER, PAYETTE, BOISE RIVER BASINS Watershed Snowpack Analysis - March 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
MANN CREEK	11.1	2.6	5.8	6.1	Mann Creek	2	153	112
CASCADE	693.2	426.9	466.3	438.3	Weiser River	5	154	102
DEADWOOD	164.0	83.3	60.7	88.5	North Fork Payette	8	135	114
ANDERSON RANCH	450.2	274.7	146.4	268.0	South Fork Payette	5	127	101
ARROWROCK	272.2	1.4	180.6	210.4	Payette Basin Total	14	132	109
LUCKY PEAK	293.2	183.2	107.7	120.4	Middle & North Fork Boise	5	128	96
LAKE LOWELL (DEER FLAT)	165.2	140.7	73.6	109.1	South Fork Boise River	9	128	99
					Mores Creek	5	195	121
					Boise Basin Total	16	146	105
					Canyon Creek	2	212	121

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

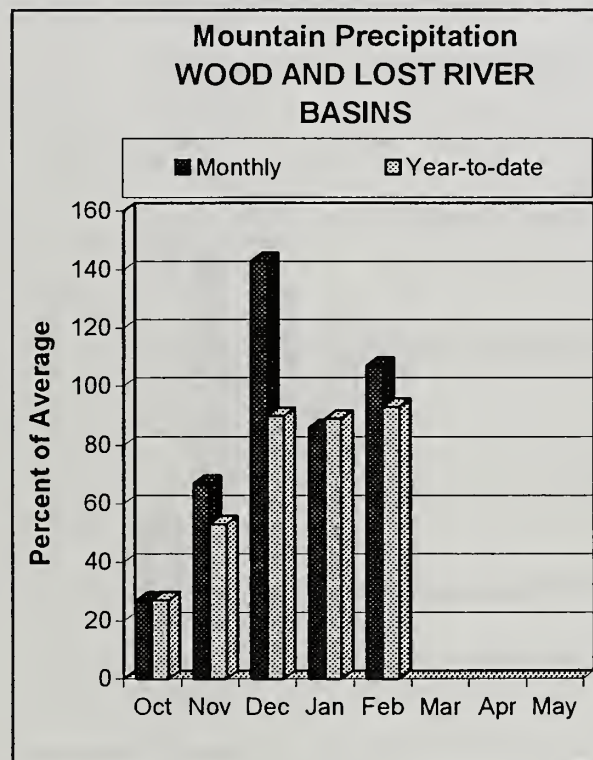
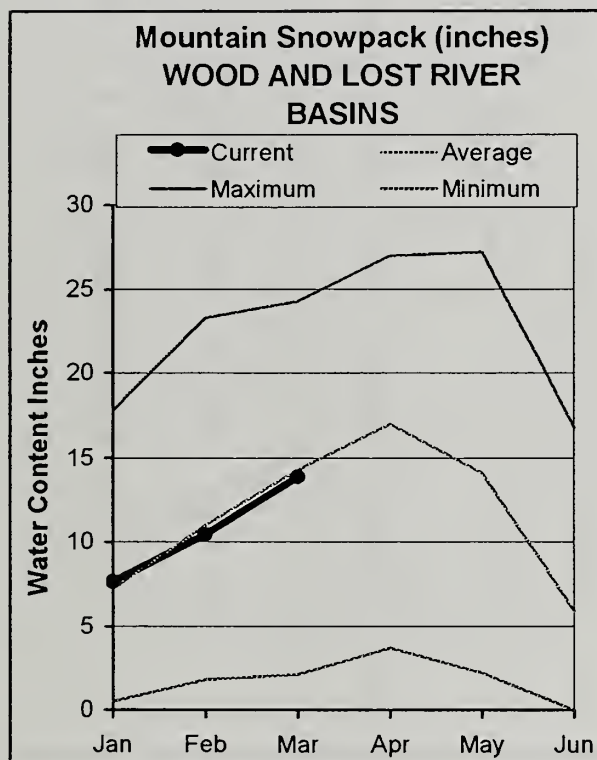
The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural volume - actual volume may be affected by upstream water management.

WOOD and LOST RIVER BASINS

MARCH 1, 2004



WATER SUPPLY OUTLOOK

February precipitation varied across these central basins ranging from 70% of average at Camas Creek SNOTEL site in the headwaters of Camas Creek to 167% at Beagle Springs SNOTEL in Montana near the Lemhi River and Birch Creek headwaters. Overall, February precipitation was 107% of average in these central Idaho basins, second highest in the state. Water year to date precipitation is 93% of average. Snowpack percentages in the Big Wood basin above Hailey decreased slightly from a month ago to 96% of average while other basins increased 2 to 11 percentage points. Overall, snowpacks are greater than last year and range from 94% of average in the Little Lost basin to 112% in Camas and Big Lost basins. Storage in Magic Reservoir is the same as a year ago at 12% full, 26% of average. Little Wood and Mackay reservoirs are both slightly better than a year ago at 47% full, and about 75% of average. Streamflow forecasts are similar to last month and call for about 92% of average for most streams except the Little Lost River at 84% of average. Water users may wish to use a lesser exceedance forecast to reduce their chance of not having enough water. The accumulative drought effects, dry soils, springs, wetlands, may take its toll on the amount of snowmelt water that will reach the streams. Based upon the Surface Water Supply Index, irrigation water shortages are still expected in the Big Wood, Big Lost and Little Lost basins especially with below average future precipitation. Precipitation in the next few months and timing of runoff will determine the final outcome this year's water supply.

WOOD AND LOST RIVER BASINS
Streamflow Forecasts - March 1, 2004

Forecast Point	Forecast Period	<<===== Drier =====		Future Conditions =====		===== Wetter =====>>		30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
BIG WOOD at Hailey (1)	APR-JUL	145	205	235	92	268	347	255
	APR-SEP	165	231	265	91	301	389	290
BIG WOOD near Bellevue	APR-JUL	87	127	158	84	193	250	188
	APR-SEP	96	138	171	86	207	267	200
CAMAS CREEK near Blaine	APR-JUL	52	75	92	92	111	143	100
	APR-SEP	53	75	93	92	112	144	101
BIG WOOD below Magic Dam (2)	APR-JUL	137	210	260	90	310	385	290
	APR-SEP	147	225	275	90	325	405	305
LITTLE WOOD R ab High Five Ck	MAR-JUL	50	65	77	91	90	110	85
	MAR-SEP	54	71	84	91	98	120	92
	APR-JUL	44	59	70	90	82	103	78
	APR-SEP	48	65	77	91	91	113	85
LITTLE WOOD near Carey (2)	MAR-JUL	56	76	89	93	102	122	96
	MAR-SEP	61	82	96	92	110	131	104
	APR-JUL	47	67	80	92	93	113	87
	APR-SEP	52	73	87	93	101	122	94
BIG LOST at Howell Ranch	APR-JUN	87	109	124	93	139	161	134
	APR-JUL	104	137	160	93	181	216	172
	APR-SEP	121	159	184	93	209	249	197
BIG LOST below Mackay Reservoir (2)	APR-JUL	77	108	130	92	152	185	142
	APR-SEP	98	134	158	91	182	217	173
LITTLE LOST blw Wet Creek	APR-JUL	18.3	23	26	84	29	34	31
	APR-SEP	22	28	32	82	36	42	39

WOOD AND LOST RIVER BASINS Reservoir Storage (1000 AF) - End of February					WOOD AND LOST RIVER BASINS Watershed Snowpack Analysis - March 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
MAGIC	191.5	23.5	23.0	89.7	Big Wood ab Hailey	8	109	96
LITTLE WOOD	30.0	14.2	12.4	17.7	Camas Creek	5	150	112
MACKAY	44.4	21.0	18.4	30.8	Big Wood Basin Total	13	120	100
					Fish Creek	3	143	109
					Little Wood River	9	122	111
					Big Lost River	7	119	112
					Little Lost River	4	122	94
					Birch-Medicine Lodge Cree	4	142	102
					Camas-Beaver Creeks	4	155	114

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

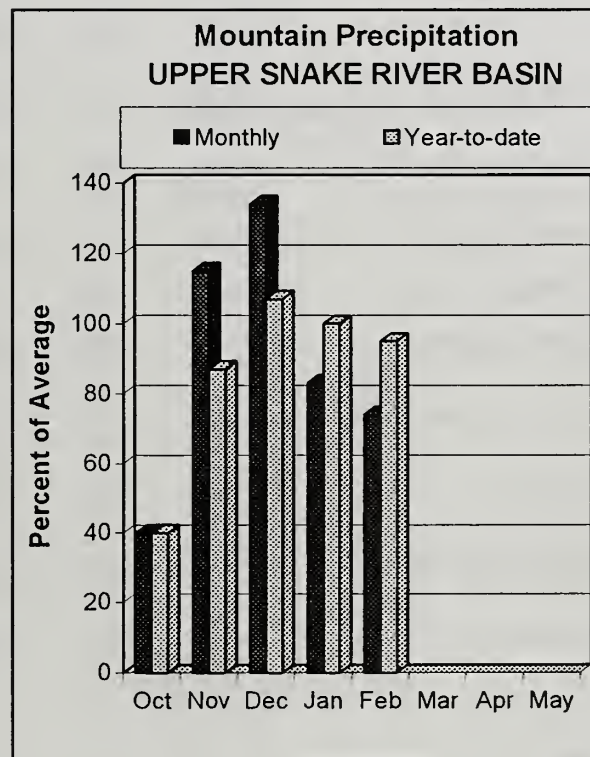
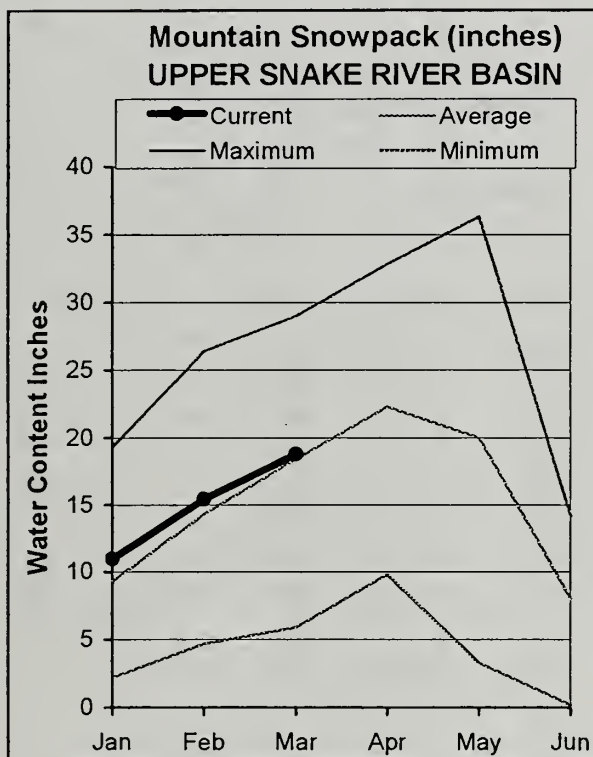
The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural volume - actual volume may be affected by upstream water management.

UPPER SNAKE RIVER BASIN

MARCH 1, 2004



WATER SUPPLY OUTLOOK

February precipitation varied across the Upper Snake River basin with mountainous SNOTEL sites receiving only 74% of average while valley weather stations recorded up to 230% of average precipitation. The lowest amounts were half of average at SNOTEL sites in the headwaters of the Snake River in Wyoming. Two SNOTEL sites in the mountains around Pocatello received about 125% of average. Precipitation is good when you are in a drought, like eastern Idaho, but having above average precipitation amounts in the mountains is more important than in the lower elevations. It is the annual accumulation of this mountainous snowpack that provides over 75% of the annual streamflow each year and also helps to recharge groundwater levels. As a result of the below average mountainous precipitation, snowpack percentages decreased 2-20 percentage points from a month ago. Snowpacks are 122% of average in the Portneuf and Willow basins, 110% in the Henrys Fork, and 85-100% for most other basins. The Snake above Palisades snowpack is 94% of average while the Snake above American Falls is 103%. Streamflow forecasts decreased from last month and now range from 80% of average in the Greys and Salt tributaries in Wyoming to 105% for the Teton River. Snake River at Heise is forecast at 89% of average. Surface irrigation water supplies should be better than the past three seasons but some shortages are possible and depend upon your water right.

UPPER SNAKE RIVER BASIN
Streamflow Forecasts - March 1, 2004

Forecast Point	Forecast Period	<===== Drier =====>		Future Conditions		>===== Wetter =====>		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding *		30% (1000AF)	10% (1000AF)	
				50% (Most Probable) (1000AF)	(% AVG.)			
HENRYS FORK near Ashton (2)	APR-JUL	460	510	545	96	580	630	570
	APR-SEP	630	690	730	95	770	830	765
HENRYS FORK near Rexburg (2)	APR-JUL	1270	1430	1540	99	1650	1810	1560
	APR-SEP	1680	1860	1980	99	2100	2280	2010
FALLS near Squirrel (1,2)	APR-JUL	290	345	370	96	395	450	385
	APR-SEP	350	405	430	96	455	510	450
TETON near Driggs	APR-JUL	130	155	173	105	191	217	165
	APR-SEP	168	200	220	105	240	270	210
TETON near St. Anthony	APR-JUL	305	360	400	99	440	495	405
	APR-SEP	365	430	475	99	520	585	480
SNAKE near Moran (1,2)	APR-SEP	675	800	855	95	910	1030	905
PACIFIC CREEK at Moran	APR-SEP	127	148	162	91	176	197	178
SNAKE above Palisades (2)	APR-JUL	1880	2070	2200	93	2330	2520	2370
	APR-SEP	2170	2380	2530	93	2680	2890	2730
GREYS above Palisades	APR-JUL	205	245	270	79	295	335	340
	APR-SEP	240	285	315	80	345	390	395
SALT near Etna	APR-JUL	175	230	265	78	300	355	340
	APR-SEP	220	280	325	77	370	430	420
PALISADES RESERVOIR INFLOW (1,2)	APR-JUL	2330	2770	2970	89	3170	3610	3330
	APR-SEP	2740	3230	3450	89	3670	4160	3870
SNAKE near Heise (2)	APR-JUL	2610	2940	3160	89	3380	3710	3560
	APR-SEP	3070	3440	3690	89	3940	4310	4160
WILLOW CREEK nr Ririe	MAR-JUL	56	72	83	94	95	115	88
BLACKFOOT RESV INFLOW	APR-JUN	86	109	124	103	139	163	120
SNAKE nr Blackfoot (1,2)	APR-JUL	3420	4030	4300	94	4570	5180	4600
	APR-SEP	4370	4980	5250	93	5520	6130	5620
PORTNEUF at Topaz	MAR-JUL	73	83	90	101	97	107	89
	MAR-SEP	90	102	110	101	118	130	109
AMERICAN FALLS RESV INFLOW (1,2)	APR-JUL	1600	2420	2790	86	3160	3980	3240
	APR-SEP	1830	2650	3020	86	3390	4210	3510

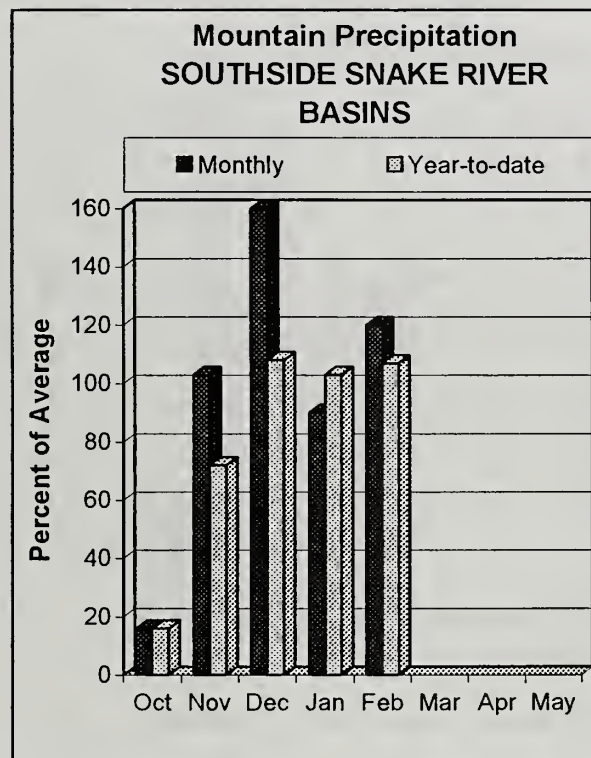
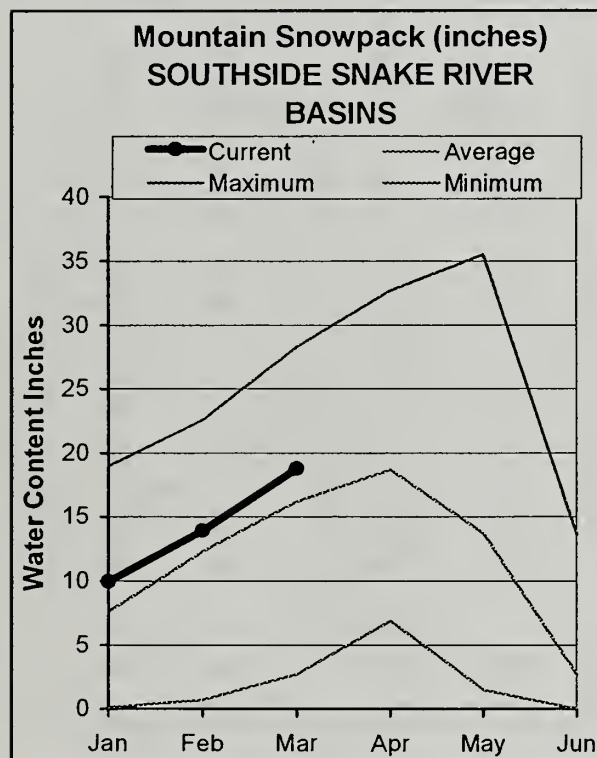
UPPER SNAKE RIVER BASIN Reservoir Storage (1000 AF) - End of February					UPPER SNAKE RIVER BASIN Watershed Snowpack Analysis - March 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
HENRYS LAKE	90.4	69.8	69.5	84.4	Henrys Fork-Falls River	10	140	111
ISLAND PARK	135.2	84.3	84.4	107.1	Teton River	8	121	100
GRASSY LAKE	15.2	9.9	12.7	12.0	Henrys Fork above Rexburg	18	132	106
JACKSON LAKE	847.0	171.6	276.3	494.0	Snake above Jackson Lake	9	119	102
PALISADES	1400.0	514.0	553.2	1033.1	Gros Ventre River	4	107	86
RIRIE	80.5	30.0	34.9	38.5	Hoback River	5	117	88
BLACKFOOT	348.7	31.0	66.7	224.7	Greys River	5	112	89
AMERICAN FALLS	1672.6	1024.0	1125.6	1271.1	Salt River	5	108	93
					Snake above Palisades	30	112	94
					Willow Creek	7	164	124
					Blackfoot River	5	124	99
					Portneuf River	7	184	121
					Snake abv American Falls	52	128	103

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table. The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural volume - actual volume may be affected by upstream water management.

SOUTHSIDE SNAKE RIVER BASINS MARCH 1, 2004



WATER SUPPLY OUTLOOK

February mountain precipitation was 120% of average, highest in the state. Magic Mountain SNOTEL received the greatest February precipitation at 151% of average; the lowest was 90-100% in northern Nevada. Even the valleys received 175% of average precipitation for February in Twin Falls and Burley. Mountainous SNOTEL sites received 1.6 to 6.1 inches in February, average is 1.5 to 4.5 inches. Twin Falls and Burley received about 1.5 inches and average is about 0.9 inches for February. Snowpack percentages increased from last month and are now 121% of average in Raft and Oakley basins and 126% in Salmon Falls basin. The Bruneau basin snowpack is 123% of average, while the Owyhee basin is the highest in the state at 155% of average. The Owyhee snowpack is 116% of its seasonal peak, while Oakley, Salmon Falls and Bruneau basins are about 107% of their seasonal peaks. The above average snowpacks in the mountains are encouraging, but with reservoirs nearly empty and streamflow forecasts just below average in Oakley and Salmon Falls basins, irrigation shortages are still possible. The stage remains set in the Owyhee basin with the reservoir at 17% full, snow at 155% of average, and streamflow forecasts at 125% of average. March weather will determine how the snow melts – rapidly with warmer temperatures and rain, or gradually with moderate temperatures. River runners will see a longer season on the Owyhee and Bruneau rivers this year.

SOUTHSIDE SNAKE RIVER BASINS
Streamflow Forecasts - March 1, 2004

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
OAKLEY RESV INFLOW	MAR-JUL	22	29	33	97	38	46	34
	MAR-SEP	25	31	36	97	41	49	37
OAKLEY RESV STORAGE	MAR-31	13.1	14.3	15.1	42	15.9	17.1	36
	APR-30	16.9	19.3	21	51	23	25	41
	MAY-31	16.8	21	24	53	27	31	45
SALMON FALLS CREEK nr San Jacinto	MAR-JUN	66	79	87	98	95	108	89
	MAR-JUL	65	79	88	95	97	111	93
	MAR-SEP	68	82	91	93	100	114	98
SALMON FALLS RESV STORAGE	MAR-31	19.8	24	27	39	30	34	70
	APR-30	34	40	44	50	48	54	88
	MAY-31	51	60	67	66	74	83	101
BRUNEAU near Hot Spring	MAR-JUL	171	216	250	106	286	345	235
	MAR-SEP	182	230	265	106	303	364	250
OWYHEE near Gold Creek (2)	MAR-JUL	38	39	39	122	40	40	32
OWYHEE nr Owyhee (2)	APR-JUL	59	83	100	122	117	141	82
OWYHEE near Rome	MAR-JUL	542	642	715	123	792	912	580
OWYHEE RESV INFLOW (2)	MAR-JUL	557	657	730	119	807	927	615
	MAR-SEP	590	692	765	119	842	962	645
	APR-SEP	372	474	550	128	632	763	430
SUCCOR CK nr Jordan Valley	MAR-JUL	11.2	17.0	21	124	25	31	16.9
SNAKE RIVER at King Hill (1,2)	APR-JUL	800	1522	1850	63	2180	2900	2940
SNAKE RIVER near Murphy (1,2)	APR-JUL	945	1719	2070	67	2420	3190	3090
SNAKE RIVER at Weiser (1,2)	APR-JUL	1527	3179	3930	68	4680	6330	5770
SNAKE RIVER at Hells Canyon Dam (1,2	APR-JUL	2215	3896	4660	72	5425	7110	6490
SNAKE blw Lower Granite Dam (1,2)	APR-JUL	12730	17729	20000	93	22270	27270	21600

SOUTHSIDE SNAKE RIVER BASINS Reservoir Storage (1000 AF) - End of February					SOUTHSIDE SNAKE RIVER BASINS Watershed Snowpack Analysis - March 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
OAKLEY	74.5	10.7	15.2	31.4	Raft River	6	203	121
SALMON FALLS	182.6	16.6	16.1	59.8	Goose-Trapper Creeks	7	225	121
WILDHORSE RESERVOIR	71.5	14.6	20.5	40.1	Salmon Falls Creek	8	236	121
OWYHEE	715.0	121.8	176.3	489.1	Bruneau River	8	198	117
BROWNLEE	1419.3	1063.5	1290.9	1090.5	Owyhee Basin Total	18	303	155

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

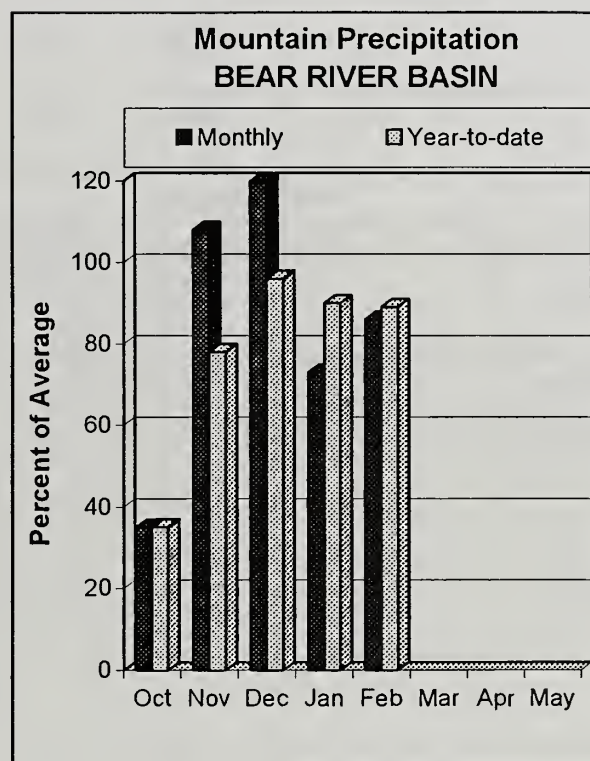
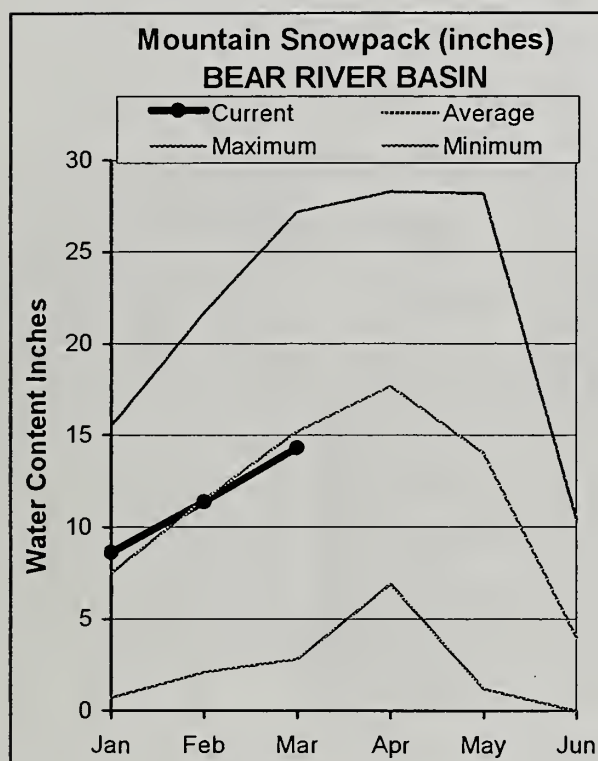
The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural volume - actual volume may be affected by upstream water management.

BEAR RIVER BASIN

MARCH 1, 2004



WATER SUPPLY OUTLOOK

February precipitation was below normal for the basin as a whole at only 86% of average. Only a few stations received above average precipitation: these include the Malad area and Oxford Springs SNOTEL site at 150% of average, and Sedgwick Peak SNOTEL site at 188%. The least amounts fell in the areas that needed the precipitation the most, the headwaters of the Bear River. Trial Lake SNOTEL site, located at 9,960 feet in these headwaters, received only 64% of average in February. The snow water at this site is only 82% of average, but contains 6 inches more water than a year ago. Snowpack percentages are 85% of average in Smith, Thomas, Montpelier and Bear River headwaters. Mink and Cub river basins are near average while Malad basin is 126% of average. Overall, the Bear River basin snowpack is 92% of average, compared to 71% a year ago. Bear Lake remains nearly empty at 11% full, 17% of average. Montpelier Reservoir is 25% full, 59% of average. Streamflow forecasts remain the same as a month ago, decreasing from 74% of average in the headwaters to 12% at Bear Lake. Water users that rely on Bear Lake should be planning and planting for irrigation shortages. However, water users who get their water supply from headwater streams or higher tributaries can expect water supplies similar to last year.

BEAR RIVER BASIN
Streamflow Forecasts - March 1, 2004

		<<===== Drier ===== Future Conditions ===== Wetter =====>>						
Forecast Point	Forecast Period	Chance Of Exceeding *						30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
Bear River nr UT-WY State Line	APR-SEP	60	79	93	74	107	126	125
Bear River ab Reservoir nr Woodruff	APR-SEP	43	56	65	46	85	113	142
Smiths Fork nr Border	APR-JUL	54	68	77	75	86	100	103
	APR-SEP	64	80	90	74	100	116	121
Bear River at Stewart Dam	APR-JUL	7.0	18.0	29	12	42	67	234
	APR-SEP	7.0	19.0	31	12	45	71	262

BEAR RIVER BASIN Reservoir Storage (1000 AF) - End of February					BEAR RIVER BASIN Watershed Snowpack Analysis - March 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BEAR LAKE	1421.0	152.8	372.7	910.7	Smiths & Thomas Forks	4	107	85
MONTPELIER CREEK	4.0	1.0	---	1.7	Bear River ab WY-ID line	14	121	84
					Montpelier Creek	2	109	85
					Mink Creek	4	147	101
					Cub River	3	137	100
					Bear River ab ID-UT line	25	130	92
					Malad River	3	180	126

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural volume - actual volume may be affected by upstream water management.

Panhandle River Basins

KOOTENAI R AT LEONIA, ID
+ LAKE KOOCANUSA (STORAGE CHANGE)
BOUNDARY CREEK NEAR PORTHILL, ID - No Corrections
MOYTE RIVER AT EASTPORT, ID - No Corrections
SMITH CREEK NEAR PORTHILL, ID - No Corrections
CLARK FORK AT WHITEHORSE RAPIDS, ID
+ HUNGRY HORSE (STORAGE CHANGE)
+ FLATHEAD LAKE (STORAGE CHANGE)
+ NOXON RAPIDS RESV (STORAGE CHANGE)
PEND OREILLE LAKE INFLOW, ID
+ PEND OREILLE R AT NEWPORT, WA
+ HUNGRY HORSE (STORAGE CHANGE)
+ FLATHEAD LAKE (STORAGE CHANGE)
+ NOXON RAPIDS (STORAGE CHANGE)
+ PEND OREILLE LAKE (STORAGE CHANGE)
+ PRIEST LAKE (STORAGE CHANGE)
PRIEST R NR PRIEST R, ID
+ PRIEST LAKE (STORAGE CHANGE)
COEUR D'ALENE R AT ENAVILLE, ID - No Corrections
ST. JOE R AT CALDER, ID - No Corrections
SPOKANE R NR POST FALLS, ID
+ COEUR D'ALENE LAKE (STORAGE CHANGE)
SPOKANE R AT LONG LAKE, WA
+ COEUR D'ALENE LAKE (STORAGE CHANGE)
+ LONG LAKE, WA (STORAGE CHANGE)

Clearwater River Basin

DWORSHAK RESERVOIR INFLOW, ID
+ DWORSHAK RESV (STORAGE CHANGE)
- CLEARWATER R AT OROFINO, ID
+ CLEARWATER R NR PECK, ID
LOCHSA RIVER NR LOWELL - No Corrections
SELWAY RIVER NR LOWELL - No Corrections
CLEARWATER R AT OROFINO, ID - No Corrections
CLEARWATER R AT SPALDING, ID
+ DWORSHAK RESV (STORAGE CHANGE)

Salmon River Basin

SALMON R AT SALMON, ID - No Corrections
SALMON R AT WHITE BIRD, ID - No Corrections

Weiser, Payette, Boise River Basins

WEISER R NR WEISER, ID - No Corrections
SF PAYETTE R AT LOWMAN, ID - No Corrections
DEADWOOD RESERVOIR INFLOW, ID
+ DEADWOOD R BLW DEADWOOD RESV NR LOWMAN
+ DEADWOOD RESV (STORAGE CHANGE)
LAKE FORK PAYETTE RIVER NR MCCALL, ID - No Corrections
NF PAYETTE R AT CASCADE, ID
+ CASCADE RESV (STORAGE CHANGE)

NF PAYETTE R NR BANKS, ID

+ CASCADE RESV (STORAGE CHANGE)

PAYETTE R NR HORSESHOE BEND, ID

+ DEADWOOD RESV (STORAGE CHANGE)

+ CASCADE RESV (STORAGE CHANGE)

BOISE R NR TWIN SPRINGS, ID - No Corrections

SF BOISE R AT ANDERSON RANCH DAM, ID

+ ANDERSON RANCH RESV (STORAGE CHANGE)

BOISE R NR BOISE, ID

+ ANDERSON RANCH RESV (STORAGE CHANGE)

+ ARROWROCK RESV (STORAGE CHANGE)

+ LUCKY PEAK RESV (STORAGE CHANGE)

Wood and Lost River Basins

BIG WOOD R AT HAILEY, ID - No Corrections

BIG WOOD R NR BELLEVUE, ID - No Corrections

CAMAS CREEK NEAR BLAINE - No Corrections

BIG WOOD R BLW MAGIC DAM NR RICHFIELD, ID

+ MAGIC RESV (STORAGE CHANGE)

LITTLE WOOD R NR CAREY, ID

+ LITTLE WOOD RESV (STORAGE CHANGE)

BIG LOST R AT HOWELL RANCH NR CHILLY, ID - No Corrections

BIG LOST R BLW MACKAY RESV NR MACKAY, ID

+ MACKAY RESV (STORAGE CHANGE)

LITTLE LOST R BLW WET CK NR HOWE, ID - No Corrections

Upper Snake River Basin

HENRY'S FORK NR ASHTON, ID

+ HENRY'S LAKE (STORAGE CHANGE)

+ ISLAND PARK RESV (STORAGE CHANGE)

HENRY'S FORK NR REXBURG, ID

+ HENRY'S LAKE (STORAGE CHANGE)

+ ISLAND PARK RESV (STORAGE CHANGE)

+ DIV FM HENRY'S FK BTW ASHTON & ST. ANTHONY, ID

+ DIV FM HENRY'S FK BTW ST. ANTHONY & REXBURG, ID

+ GRASSY LAKE (STORAGE CHANGE)

FALLS R ABV YELLOWSTONE CANAL NR SQUIRREL, ID

+ GRASSY LAKE (STORAGE CHANGE)

TETON R ABV SO LEIGH CK NR DRIGGS, ID - No Corrections

TETON R NR ST. ANTHONY, ID

- CROSS CUT CANAL

+ SUM OF DIVERSIONS ABV GAGE

SNAKE R NR MORAN, WY

+ JACKSON LAKE (STORAGE CHANGE)

PALISADES RESERVOIR INFLOW, ID

+ SNAKE R NR IRWIN, ID

+ JACKSON LAKE (STORAGE CHANGE)

+ PALISADES RESV (STORAGE CHANGE)

SNAKE R NR HEISE, ID

+ JACKSON LAKE (STORAGE CHANGE)

+ PALISADES RESV (STORAGE CHANGE)

BLACKFOOT RESERVOIR INFLOW, ID
 + BLACKFOOT RIVER
 + BLACKFOOT RESERVOIR (STORAGE CHANGE)
 SNAKE R NR BLACKFOOT, ID
 + PALISADES RESV (STORAGE CHANGE)
 + JACKSON LAKE (STORAGE CHANGE)
 + DIV FM SNAKE R BTW HEISE AND SHELLEY GAGES
 + DIV FM SNAKE R BTW SHELLEY AND BLACKFT, ID
 PORTNEUF R AT TOPAZ, ID - No Corrections
 AMERICAN FALLS RESERVOIR INFLOW, ID
 + SNAKE RIVER AT NEELEY
 + ALL CORRECTIONS MADE FOR HENRY'S FK NR REXBURG, ID
 + JACKSON LAKE (STORAGE CHANGE)
 + PALISADES RESV (STORAGE CHANGE)
 + DIV FM SNAKE R BTW HEISE AND SHELLEY GAGES
 + DIV FM SNAKE R BTW SHELLEY AND BLACKFT GAGES

Southside Snake River Basins

OAKLEY RESERVOIR INFLOW, ID
 + GOOSE CK ABV TRAPPER CK NR OAKLEY, ID
 + TRAPPER CK NR OAKLEY, ID
 SALMON FALLS CK NR SAN JACINTO, NV - No Corrections
 BRUNEAU R NR HOT SPRINGS, ID - No Corrections
 OWYHEE R NR GOLD CK, NV
 + WILDHORSE RESV (STORAGE CHANGE)
 OWYHEE R NR OWYHEE, NV
 + WILDHORSE RESV (STORAGE CHANGE)
 OWYHEE R NR ROME, OR - No Corrections
 OWYHEE RESERVOIR INFLOW, OR
 + OWYHEE R BLW OWYHEE DAM, OR
 + OWYHEE RESV (STORAGE CHANGE)
 + DIV TO NORTH AND SOUTH CANALS
 SUCCOR CK NR JORDAN VALLEY, OR - No Corrections
 SNAKE R - KING HILL, ID - No Corrections
 SNAKE R NR MURPHY, ID - No Corrections
 SNAKE R AT WEISER, ID - No Corrections
 SNAKE R AT HELLS CANYON DAM, ID
 + BROWNLEE RESV (STORAGE CHANGE)

Bear River Basin

BEAR R NR RANDOLPH, UT
 + SULPHUR CK RESV (STORAGE CHANGE)
 + CHAPMAN CANAL DIVERSION
 + WOODRUFF NARROWS RESV (STORAGE CHANGE)
 SMITHS FORK NR BORDER, WY - No Corrections
 THOMAS FORK NR WY-ID STATELINE - No Corrections (Disc)
 BEAR R BLW STEWART DAM, ID
 + SULPHUR CK RESV (STORAGE CHANGE)
 + CHAPMAN CANAL DIVERSION
 + WOODRUFF NARROWS RESV (STORAGE CHANGE)
 + DINGLE INLET CANAL
 + RAINBOW INLET CANAL

MONTPELIER CK AT IRR WEIR NR MONTPELIER, ID (Disc)
 + MONTPELIER CK RESV (STORAGE CHANGE)
 CUB R NR PRESTON, ID - No Corrections

RESERVOIR CAPACITY DEFINITIONS (Units in 1,000 acre-feet, KAF)

Different agencies use various definitions when reporting reservoir capacity and contents. Reservoir storage terms include dead, inactive, and surcharge storage. This table lists these volumes for each reservoir, and defines the storage volumes NRCS uses when reporting capacity and current reservoir storage. In most cases, NRCS reports usable storage, which includes active and inactive storage. (Revised January 2002)

BASIN/ RESERVOIR	DEAD STORAGE	INACTIVE STORAGE	ACTIVE STORAGE	SURCHARGE STORAGE	NRCS CAPACITY	NRCS CAPACITY INCLUDES
<u>PANHANDLE REGION</u>						
HUNGRY HORSE	39.73	--	3451.00	--	3451.0	ACTIVE
FLATHEAD LAKE	Unknown	--	1791.00	--	1791.0	ACTIVE
NOXON RAPIDS	--	--	335.00	--	335.0	ACTIVE
PEND OREILLE	406.20	112.40	1042.70	--	1561.3	DEAD+INACTIVE+ACTIVE
COEUR D'ALENE	--	13.50	225.00	--	238.5	INACTIVE+ACTIVE
PRIEST LAKE	20.00	28.00	71.30	--	119.3	DEAD+INACTIVE+ACTIVE
<u>CLEARWATER BASIN</u>						
DWORSHAK	--	1452.00	2016.00	--	3468.0	INACTIVE+ACTIVE
<u>WEISER/BOISE/PAYETTE BASINS</u>						
MANN CREEK	1.61	0.24	11.10	--	11.1	ACTIVE
CASCADE	--	46.70	646.50	--	693.2	INACTIVE+ACTIVE
DEADWOOD	--	--	164.00	--	164.0	ACTIVE
ANDERSON RANCH	24.90	37.00	413.10	--	450.1	INACTIVE+ACTIVE
ARROWROCK	--	--	272.20	--	272.2	ACTIVE
LUCKY PEAK	--	28.80	264.40	13.80	293.2	INACTIVE+ACTIVE
LAKE LOWELL	7.90	5.80	159.40	--	165.2	INACTIVE+ACTIVE
<u>WOOD/LOST BASINS</u>						
MAGIC	--	--	191.50	--	191.5	ACTIVE
LITTLE WOOD	--	--	30.00	--	30.0	ACTIVE
MACKAY	0.13	--	44.37	--	44.4	ACTIVE
<u>UPPER SNAKE BASIN</u>						
HENRYS LAKE	--	--	90.40	--	90.4	ACTIVE
ISLAND PARK	0.40	--	127.30	7.90	135.2	ACTIVE+SURCHARGE
GRASSY LAKE	--	--	15.18	--	15.2	ACTIVE
JACKSON LAKE	--	--	847.00	--	847.0	ACTIVE
PALISADES	44.10	155.50	1200.00	--	1400.0	DEAD+INACTIVE+ACTIVE
RIRIE	4.00	6.00	80.54	10.00	80.5	ACTIVE
BLACKFOOT	--	--	348.73	--	348.7	ACTIVE
AMERICAN FALLS	--	--	1672.60	--	1672.6	ACTIVE
<u>SOUTHSIDE SNAKE BASINS</u>						
OAKLEY	--	--	74.50	--	74.5	ACTIVE
SALMON FALLS	48.00	--	182.65	--	182.6	ACTIVE
WILDHORSE	--	--	71.50	--	71.5	ACTIVE
OWYHEE	406.83	--	715.00	--	715.0	ACTIVE
BROWNLEE	0.45	444.00	975.30	--	1419.3	INACTIVE+ACTIVE
<u>BEAR RIVER BASIN</u>						
WOODRUFF NARROWS	--	1.50	57.30	--	57.3	ACTIVE
WOODRUFF CREEK	--	4.00	4.00	--	4.0	ACTIVE
BEAR LAKE	--	--	1421.00	--	1421.0	ACTIVE
MONTPELIER CREEK	0.21	--	3.84	--	4.0	DEAD+ACTIVE

BLACKFOOT RESERVOIR INFLOW, ID

- + BLACKFOOT RIVER
- + BLACKFOOT RESERVOIR (STORAGE CHANGE)
- SNAKE R NR BLACKFOOT, ID
- + PALISADES RESV (STORAGE CHANGE)
- + JACKSON LAKE (STORAGE CHANGE)
- + DIV FM SNAKE R BTW HEISE AND SHELLEY GAGES
- + DIV FM SNAKE R BTW SHELLEY AND BLACKFT, ID
- PORTNEUF R AT TOPAZ, ID - No Corrections
- AMERICAN FALLS RESERVOIR INFLOW, ID
- + SNAKE RIVER AT NEELEY
- + ALL CORRECTIONS MADE FOR HENRYS FK NR REXBURG, ID
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Southside Snake River Basins

- OAKLEY RESERVOIR INFLOW, ID
- + GOOSE CK ABV TRAPPER CK NR OAKLEY, ID
 - + TRAPPER CK NR OAKLEY, ID
 - SALMON FALLS CK NR SAN JACINTO, NV - No Corrections
 - BRUNEAU R NR HOT SPRINGS, ID - No Corrections
 - OWYHEE R NR GOLD CK, NV
 - + WILDHORSE RESV (STORAGE CHANGE)
 - OWYHEE R NR OWYHEE, NV
 - + WILDHORSE RESV (STORAGE CHANGE)
 - OWYHEE R NR ROME, OR - No Corrections
 - OWYHEE RESERVOIR INFLOW, OR
 - + OWYHEE R BLW OWYHEE DAM, OR
 - + OWYHEE RESV (STORAGE CHANGE)
 - + DIV TO NORTH AND SOUTH CANALS
 - SUCCOR CK NR JORDAN VALLEY, OR - No Corrections
 - SNAKE R - KING HILL, ID - No Corrections
 - SNAKE R NR MURPHY, ID - No Corrections
 - SNAKE R AT WEISER, ID - No Corrections
 - SNAKE R AT HELLS CANYON DAM, ID
 - + BROWNLEE RESV (STORAGE CHANGE)

Bear River Basin

- BEAR R NR RANDOLPH, UT
- + SULPHUR CK RESV (STORAGE CHANGE)
 - + CHAPMAN CANAL DIVERSION
 - + WOODRUFF NARROWS RESV (STORAGE CHANGE)
 - SMITHS FORK NR BORDER, WY - No Corrections
 - THOMAS FORK NR WY-ID STATELINE - No Corrections (Disc)
 - BEAR R BLW STEWART DAM, ID
 - + SULPHUR CK RESV (STORAGE CHANGE)
 - + CHAPMAN CANAL DIVERSION
 - + WOODRUFF NARROWS RESV (STORAGE CHANGE)
 - + DINGLE INLET CANAL
 - + RAINBOW INLET CANAL

MONTPELIER CK AT IRR WEIR NR MONTPELIER, ID (Disc)

- + MONTPELIER CK RESV (STORAGE CHANGE)

CUB R NR PRESTON, ID - No Corrections

RESERVOIR CAPACITY DEFINITIONS (Units in 1,000 acre-feet, KAF)

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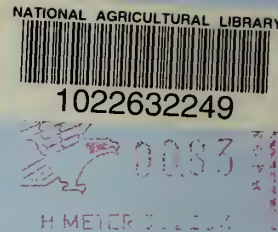
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